

# ABSTRACT OF THE DISCLOSURE

An object of the present invention is to provide a producing method by which minute metal balls having a high sphericity or roundness and a uniform diameter.

The present invention provides a method of producing minute metal balls, comprising the steps of cutting a wire material having a diameter  $\phi$  at predetermined distances to provide metal pieces having a cut length L equal to or smaller than 2 mm and a ratio  $L/\phi$  in a range of  $0.1 \leq L/\phi \leq 3.0$ , and introducing the metal pieces into a plasma flame to spheroidize the metal pieces.

In the present invention, it is preferable that the metal pieces are made of any metal selected from the group consisting of Cu, Ag, Au and Al, or an alloy as a main of any of these metals. It is also preferable that the metal pieces are made of any metal selected from the group consisting of Fe, Ti, W, Ni and Cr, or an alloy as a main of any of these metals.

In addition, it is preferable that the metal pieces are introduced into the plasma flame forming a reducing atmosphere; that 1 to 20 % by mass of a hydrogen gas is contained in a plasma operating gas for generating the plasma flame; and that RF plasma is used as the plasma flame.